

CLAIMS

What is claimed is:

1. A hydraulic vapor recovery valve comprising:
a valve body assembly;
a top head assembly;
a means for demountably securing the top head assembly to the valve body assembly,
wherein removal of the means for demountably securing the top head assembly to the valve body assembly allows the top head assembly to be axially removed from the valve body assembly without requiring substantial rotation of the top head assembly.
2. The valve of claim 1, wherein the means for demountably securing the top head assembly to the valve body assembly comprises a clamp ring assembly.
3. The valve of claim 2, wherein the clamp ring assembly engages a flange of the top head assembly and a flange of the valve body assembly.
4. The valve of claim 2, wherein the top head assembly comprises a flange having a planar register surface and wherein the valve body assembly comprises a flange having a planar register surface, and wherein the clamp ring assembly clamps the register surface of the flange of the top head assembly against the register surface of the flange of the valve body assembly.
5. The valve of claim 1, wherein the valve body assembly is a "T" style valve.

6. The valve of claim 1, wherein the valve body assembly comprising an inlet for connection to a vapor source, an outlet for connection to a vapor recovery system and a valve opening for attachment of the top head assembly.

7. A hydraulic vapor recovery valve comprising:

a valve body assembly comprising an inlet for connection to a vapor source, an outlet for connection to a vapor recovery system and a valve opening for attachment of a top head and cylinder assembly;

the top head and cylinder assembly having at least one hydraulic fluid port;

a means for clamping the top head and cylinder assembly to the valve body assembly.

8. The valve of claim 7, wherein the means for clamping the top head and cylinder assembly to the valve body assembly comprises a clamp ring assembly.

9. The valve of claim 8, wherein the clamp ring assembly engages a flange of the top head assembly and a flange of the valve body assembly.

10. The valve of claim 8, wherein the top head and cylinder assembly comprises a flange having a planar register surface and wherein the valve body assembly comprises a flange having a planar register surface, and wherein the clamp ring assembly clamps the register surface of the

flange of the top head and cylinder assembly against the register surface of the flange of the valve body assembly.

11. The valve of claim 1, wherein the valve body assembly is a "T" style valve.

12. A hydraulic vapor recovery valve comprising:

a valve body assembly comprising an inlet for connection to a vapor source, an outlet for connection to a vapor recovery system and a valve opening for attachment of a top head and cylinder assembly;

the top head and cylinder assembly comprising a hydraulic fluid port, a piston moveable in a cylinder, the piston engages a first end of a piston rod which is connected at a second end to a sealing plug which moves in conjunction with the piston from a first position wherein the sealing plug seals the inlet of the valve body and a second position which allows vapor to enter the valve body through the inlet; and

a means for demountably connecting the top head and cylinder assembly to the valve body wherein the top head and cylinder assembly is removable from the valve body without removal of an attached hydraulic fluid line from the hydraulic fluid port.

13. The valve of claim 12, wherein the means for demountably connecting the top head and cylinder assembly to the valve body assembly comprises a clamp ring assembly.

14. The valve of claim 13, wherein the clamp ring assembly comprises a first semi-annular U-shaped channel hingedly connected at a first end to a first end of a second semi-annular U-shaped channel wherein the open end of each U-shaped channel is oriented radially inward, wherein a second end of each semi-annular U-shaped channel is locked into position with an adjustable latch mechanism.
15. The valve of claim 12, wherein the removal of the means for connecting the top head and cylinder assembly to the valve body allows the top head and cylinder assembly to be generally axially removed from the valve body assembly.
16. The valve of claim 12, wherein the valve body assembly is a "T" style valve body having a second connection to the vapor recovery system.
17. A hydraulic vapor recovery valve comprising:
- a valve body assembly comprising an inlet for connection to a vapor source, an outlet for connection to a vapor recovery system and a valve opening for attachment of a top head and cylinder assembly;
- the top head assembly comprising a stem portion including a hydraulic fluid port, a piston moveable in a cylinder fixably attached to the stem portion, wherein the piston engages a first end of a piston rod which is connected at a second end to a sealing plug which moves in an axial direction of the piston rod in conjunction with the piston from a first position wherein the sealing

plug seals the inlet of the valve body and a second position which allows vapor to enter the valve body through the inlet;

a means for demountably securing the top head assembly to the valve body assembly, wherein removal of the means for demountably securing the top head assembly to the valve body assembly allows the top head assembly to be generally axially removed from the valve body assembly without substantial rotation of the top head assembly.

18. The valve of claim 17, wherein the means for demountably securing the top head assembly to the valve body assembly comprises a clamp ring assembly.

19. A method for vapor recovery comprising the following steps:

providing a valve body assembly comprising an inlet for connection to a vapor source, an outlet for connection to a vapor recovery system and a valve opening for attachment of a top head and cylinder assembly;

providing a top head and cylinder assembly and axially inserting a portion of the top head and cylinder assembly into the valve opening of the valve body until a flange of the top head and cylinder assembly registers against a flange of the valve body;

attaching the top head and cylinder assembly to the valve body by clamping the flange of the top head and cylinder assembly to the valve body.

20. A method for cleaning a vapor recovery valve comprising a valve body and a top head and cylinder assembly partially inserted into the valve body and secured to the valve body, the method comprising the following steps:

removing a clamp ring from the vapor recovery valve to unsecure the top head assembly from the valve body;

axially moving the top head and cylinder assembly out of and away from the valve body without disconnecting a hydraulic line attached to the top head and cylinder assembly and thereby exposing the top head and cylinder assembly and the valve body; and

cleaning the exposed top head and cylinder assembly and the valve body using a predetermined cleaning agent.